## **Quality matters**

Mansfield Advisors looks at how changes at the CQC are impacting providers

## **Medical indemnity**

Howden's Simon Gale talks about contract-assured insurance for clinicians

#### Forever young

The team at Candesic explores emerging trends in the longevity market



By 2030, the 50-plus population is projected to be a significant driver of consumer growth in the longevity market, representing an emerging opportunity for global private equity and impact funds yet to be tapped by savvy investors. Dr Michelle Tempest and Andrew Kerr at Candesic review the megatrends as the metrics shift from 'life span' to 'health span' focusing on vitamin and mineral supplements, alongside muscle health





# Lotions, potions and longevity

## untapped opportunities

o date, nobody in our history has lived past 120 years. If we were to guess who will break this record, the name Bryan Johnson immediately comes to mind.

Johnson is a viral sensation. Photos of him with his shirt off and a six-pack of pure muscle, not silicon enhanced, are plastered across the popular press. His name has become synonymous with eternal youth. His team of experts have spearheaded how to decelerate and reverse bodily aging. On his website, he shares 'the blueprint' of how to stay young. Credit to him and his scientific team - they freely share all medical evidence behind their mammoth 'research study of a man'.

Although Johnson is 46 years old, he proudly displays youthful metrics having followed two years of a longevity blueprint. They include:

- A slowed pace of aging by the equivalent of 31 years
- Inflammation 85% below an average 18-year-old
- Cardiovascular capacity in the top 1.5% of 18-year-olds
- Total bone mineral density in the top 0.2% of 30-year-olds
- Leg press single rep max: 240lbs - top 10% of 18-year-olds
- Evidenced 50+ optimal clinical outcome biomarkers
- oxLDL levels in top 3% (11ng/mL ref range 10-170)

Slowing aging is the subject of serious research. The number of centenarians has been growing and will keep growing. The Pew Research Centre predicts there will be 3.7 million worldwide by 2050 - three times as many per head of population as in 2015.

AS A PLETHORA OF START-UPS TRY TO JUMP ON THE BANDWAGON, WHICH COMPANIES ARE BACKED BY SCIENCE AND WHICH BY CHARLATANS?

Alongside Bryan Johnson there are other global money men who have invested heavily in longevity, including Peter Thiel, a co-founder of PayPal, Larry Page and Sergey Brin, co-founders of Google, Amazon founder Jeff Bezos and Sam Altman, head of OpenAl.

But what lies beneath the spin? As a plethora of start-ups try to jump on the bandwagon, which companies are backed by science and which by charlatans? Outside the rippling muscles of Bryan Johnson, what can the everyday consumer do to help their wellness?

To date and perhaps for far too long, staying well has been based on a 'do it yourself' guesswork approach. Lacking a scientific manual, clinical research teams have historically focused on illness rather than how to stay well.

Consumers who lack rigorous evidence have sought random remedies for everything including sleep, muscle growth and nutrition right through to strong nail growth.

#### An evolving market

Candesic predicts that although evolution of this sector will not happen overnight, the personalised revolution of the health and wellness sector is here to stay and will grow.

The winners are likely to be investors who look to be 'super-consolidators' of companies with a focus on M&A to help join the dots of longevity across fitness, nutrition, supplements and personalised data feedback.

Platforms and brands are likely to spring up across everything from new therapeutics options - currently in clinical trials - personalised stem cell therapy, mitochrondrial biohacking, cellular senescence through to genetic monitoring and manipulation.

For now, the substance of this article remains about how to link evidence-based metrics to clinically back the sale of everything from improved muscle mass through to mass market, fact-based supplements such as vitamin D and garlic.



## **Tablet munching - what** are we ingesting?

People are increasingly flocking to the health and wellness aisles of pharmacies and supermarkets.

Various sources put the UK's vitamin and minerals market at over £500m, with over half of the British population taking some form of nutritional supplement. The pandemic boosted consumer spending on home fitness and holistic health.

Vitamin and mineral manufacturers leveraged this trend with targeted marketing strategies - often focused on superficial model looks rather than scientific consen-

A quick review of marketing materials features celebrities such as David Gandy and Nicole Scherzinger enforcing positive messaging around beauty and wellness. Despite advertising regulatory standards, few, if any, feature the latest in medical research.

Of course, with the fast pace of modern living, it can be a challenge to maintain a healthy balanced diet. So, it's worth being reminded that there can be dangers associated with taking medication which has not been prescribed nor measured. For example, large quantities of Vitamin A, alongside beta-carotene supplements, has been associated with an increased risk of lung cancer in smokers.

One study with 400,000 participants saw the authors conclude there was no clear evidence of a beneficial effect of supplements on all-cause mortality, cardiovascular disease, or cancer.

Another study evaluated the efficacy of a daily multivitamin to prevent cognitive decline among 6,000 men aged 65 years or older. After 12 years of follow-up, there were no differences between the

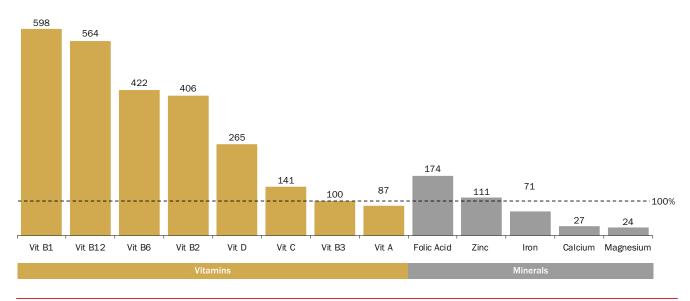
multivitamin and placebo groups in overall cognitive performance or verbal memory.

As with many other behavioural choices, there can be preference, or psychological bias for more rather than less - even when more is of no utility. It is interesting to see how multivitamins overindex vs. the daily recommended dosage in vitamin content as a way to provide us with additional comfort that our choices are the right ones. Interestingly however, they are underindexed vs. the daily recommended dosage in minerals - a potential reason being the higher cost of such ingredients (see Figure One).

Having said that, supplements can be beneficial. As the days get shorter, it's also a helpful reminder that a 10-microgram supplement of vitamin D is recommended by the NHS during autumn and winter months.

What perhaps is less well known is

FIGURE ONE AVERAGE VITAMIN AND MINERAL CONTENT OF MULTI-VITAMIN PRODUCTS AS % OF NUTRITIONAL REFERENCE VALUE (NRV)



SOURCE CANDESIC ANALYSIS, SAMPLE INCLUDES MULTIVITAMIN OFFERINGS OF VITABIOTICS, CENTRUM, SEVEN SEAS, BOOTS AND HOLLAND & BARRETT

the variation in the active ingredients by supplement manufacturers. Figure Two highlights the varying degrees of vitamin D content.

#### Physical body health

On top of lotions, potions and tablets, there is also a healthy focus on maintaining muscle mass. A recent review in MIT Technology highlighted the robust molecular and electrical link between brain and muscle. Skeletal muscle allows the body to move and is one the largest organs in the human body. It is also an endocrine tissue, which means it releases molecules that travel to other parts of your body. Myokines get released into the bloodstream when muscles contract which can help create new cells or perform metabolic activities. The modern gym culture has been shown to be beneficial, not just for metabolism and muscle mass, but also for long term cognitive health. Mus Ali a fitness trainer, who runs a podcast on Spotify and YouTube channel said: 'It's likely that the entire personal trainer sector will professionalise as biomechanics and body health are researched to become more bespoke and this will drive further growth.'

THE WELLNESS MARKET IS **NOT LIKELY TO** ABATE, IN FACT, IT IS LIKELY TO EXPAND. YOUNGER **GENERATIONS** ARE ALREADY AN **INCREASINGLY** IMPORTANT PART OF THE WELLNESS **TREND** 

#### What does the future hold?

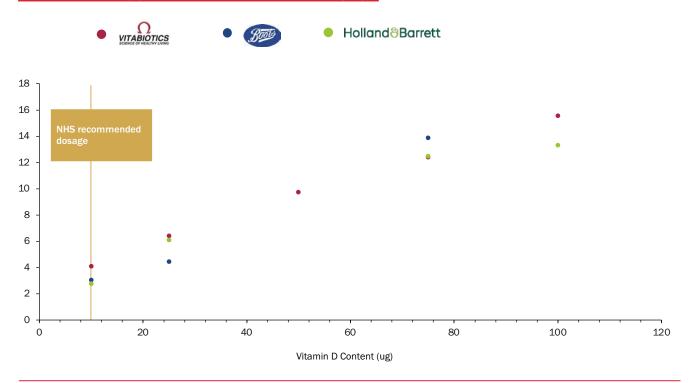
The wellness market is not likely to abate, in fact, it is likely to expand. Younger generations are already an increasingly important part of the wellness trend. What is exciting about populations being curious about their health is that it drives

a desire for more bespoke advice.

For example, British company Nourished supplies layered stacks of vitamins in colourful gummies personalised to individual tastes and requirements. The company has been growing steadily over recent years and is currently delivering 15,000 subscription boxes a month across the UK and US at a costly £35.99 per month.

Another growing trend is in intra-venous (IV) vitamin treatments. Pioneered by John Myers in the 1960s, these have been positioned as exclusive health treatments endorsed by the likes of Gwyneth Paltrow and the Kardashians. Spa-like 'drip bars' offer VIP treatments to those who can afford the c.£700 price tag. Reviv is one such company that is leading the way in this area, with clinics in Harrods and Harvey Nichols among others. Anecdotally, large doses of certain vitamins are offered at these locations; for example, up to 25,000mg of Vitamin C - over 300 times more than the recommended 80mg daily - aimed at preventing colds and other infections. While there seems to be growth in demand for these treatments. there is no clinical evidence showing statistical improvement in health from IV vitamin treatments.





SOURCE CANDESIC ANALYSIS (BASED ON PUBLISHED PRICES ON RESPECTIVE WEBSITES, FOR PACKS CONTAINING NEAREST NUMBER OF TABLETS TO 100)

#### **Data driven wellness**

What is exciting about the future is the exponential growth in personal data and the increasing evidence base from the rising number of wellness clinical teams. Over time, data from wearables, which already measure everything from sleep to steps, are likely to penetrate the health record.

On top of this, consumer test kits have proliferated. PCR saliva tests were part of everyday pandemic life and this expanded into blood test demand. Consumers have woken up to wanting their own data about all sorts of parameters from iron levels through to hormonal metrics. The result is that companies such as Thriva, Medichecks, Bluecrest, Randox and Forth to name but a few, are proliferating. Some started from humble beginnings servicing elite athletes and have grown into popular high street phlebotomy and home finger prick monitoring. Blood tests are already helping in the pursuit to understand the secrets behind longevity.

Of course, it's far from simple to unravel the complex interplay of genetic predisposition and lifestyle factors and how

CONSUMERS HAVE **WOKEN UP TO** WANTING THEIR OWN DATA ABOUT **ALL SORTS OF** PARAMETERS... THE RESULT IS THAT **COMPANIES ARE** PROLIFERATING

they interact throughout a person's life. A recent study in GeroScience unveiled some common blood-based biomarkers, including levels of cholesterol and glucose, in people who live over 90 years. On the whole, those who made it to their hundredth birthday tended to have lower levels of glucose, creatinine and uric acid from their sixties onwards. Such studies further snowball growth in companies

that continuously measure blood glucose using real time devices - such as Zoe, Supersapians, InsideTracker, Dexcom and many more. Data platforms also lend themselves well to tracking other kinds of medical measurements such as VO2, blood pressure and more.

## Consumer healthcare is becoming precision healthcare

The convergence of availability of tools that allow for evidence-based outcomes with the increased capability to target wellness supplements and advice, is creating a nascent market that will thrive and grow significantly over the next five years.

Longevity offers a business opportunity to take away the guesswork and use data to improve wellness.

Consumerisation of healthcare is driving the desire for personalised precision data and this in turn will have a positive impact on 'health span'. In turn early adopters, investors and consolidators are likely to win in this expanding market.